Firms, Industries, and Cross-Subsidies: Patterns in the Distribution of UI Benefits and Taxes

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Purpose

This brief summarizes an evaluation study that examines the nature and extent of the transfers between firms, industries, and regions that occur through UI. The unique feature of this analysis is that it offers information at the firm level. The objectives of the study are:

1. To document the extent and nature of cross-subsidies between regions and industries;
2. To explain them in an accounting sense; and
3. To document them between firms and within industries.

As one of twenty-three component evaluation studies, this profile of UI patterns of use by regions, industries and firms is an essential ingredient of the evaluation of UI Regular Benefits.

Background

How does UI influence the demand for labour? Economic theorists have pointed to the degree of "experience rating" in premium rates as the major element. A UI program is said to be experience rated when firms pay premiums that are tied, in an actuarial sense, to the use their workers make of UI. Experience rating is a "tax on layoffs" or more generally a "tax on unemployment."

A premium structure that is not actuarially sound may influence the kinds of industries and their relative sizes. In theory, UI may act as a wage subsidy and may permit firms to pay lower wages than they otherwise would in order to compensate their workers for the risk of layoff. In this way the expansion of high unemployment industries would be subsidized by a surcharge on more stable industries. As a result, the economy could be more prone to higher unemployment.

Theorists have also noted that a lack of experience rating may influence employment fluctuations within industries. Since the premiums a firm pays bear no relationship to its human resource practices, part of the adjustment costs associated with depressed sales may be shifted to the public purse by greater use of layoffs rather than other mechanisms such as changes in hours, wages, production, or more fundamental changes in the job skills and tasks of workers. This incentive would be strongest when depressed demand can be accurately forecast: temporary and seasonal layoffs may tend to be higher than they otherwise would be, but permanent layoffs may (to the extent that the business cycle is predictable) also increase.

The objective of this study is to document the magnitude and nature of the cross-subsidies occurring through UI, and to explain them in an accounting sense. As such the analysis does not deal explicitly with the changes in behaviour due to the lack of experience rating in the UI payroll tax. Rather it should be thought of as a documentation of the extent of the incentives that may induce such changes, or perhaps even the outcome of such changes.

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Methodology and Data

The study is based entirely on administrative data sets that together offer universal coverage of firms, their workers, and UI beneficiaries. In particular, firm level totals of UI taxes paid are calculated from the tax records of employees, firm level totals of UI benefits received by employees are calculated from UI administrative data, and these totals are linked together using a longitudinally consistent catalogue of firms developed by the Business and Labour Market Analysis Division of Statistics Canada. All of the analysis was performed according to Statistics Canada confidentiality rules. No information that would lead to the identification of a particular firm or individual is made available.

The data extend from 1986 to 1990 inclusive, and are measured in constant 1991 dollars. The focus of the analysis is on the relative benefit-tax ratio, which may be thought of as the value of benefits received per dollar contributed (corrected for the possibility that the overall UI program account may not be balanced).

Key Findings

The UI program involves long-standing redistribution of funds between industries and provinces

The major redistribution of funds is toward the primary sector and construction from the service industries, and toward the provinces east of the Ottawa river from Ontario.

On average, Construction received $1.2 billion annually (a total of more than $6 billion over the five years under study), while Forestry and Agriculture received lower but still substantial annual amounts of $265 and $222 million. The most notable net contributors are Community, Business, and Personal Services (CBPS) which was surcharged more than $710 million annually, and Public Administration which was surcharged more than $660 million, but Transportation as well as Finance also paid substantial surcharges.

In the period under study, almost $2.3 billion was taken out of the Ontario economy each year by the UI program, and the same amount was put into the economies of the Atlantic and Quebec. The latter is the single largest net recipient, receiving $871 million annually.

These patterns have persisted for at least the last twenty years. Those industries identified as being net recipients during the 1986-90 period were also net recipients during 1975-82; while those being surcharged during the recent period were also being surcharged then. Over the last twenty years the primary sector has been receiving ever larger transfers, while those surcharged during the 1970s were even more strongly surcharged during the 1980s.

Industries that are net recipients have higher than average layoff rates and lower than average contributions

Generally, if an industry receives a net positive transfer through UI, it is because of higher than average layoff rates and lower than average contributions. These industries tend to generate a greater number of claims per job than the average Canadian industry, and (since contributions are directly tied to earnings) they tend to pay lower weekly wages than average. Sixty of the 123 industries that are net recipients fall into this category. All but one of the remaining are either high claim industries or low wage industries. In a similar vein, it is rare that an industry is a net contributor if its layoff rate is above average, and its earnings are below average.

Very high rates of cross-subsidization are also associated with much higher rates of temporary layoffs.

A small fraction of firms are net recipients year in - year out, but they account for a large fraction of benefits paid

Among the firms that were in operation from 1986 through 1989, only 12 per cent were net recipients in each year. These "always subsidized" firms represent only 14 per cent of all jobs, but 38 per cent of all UI benefits paid. On the other hand, almost 42 per cent of firms never received a subsidy over this period, and while these "never subsidized" firms represent more than 56 per cent of all jobs they account for only 31 per cent of UI benefits. Thus, cross-subsidization through the UI program is heavily concentrated among the small minority of firms that receives a net positive transfer year in - year out.

Just 22 three digit SIC industries account for about 70 per cent of these firms. A significant fraction are found in the Construction industries: fully 16 per cent belong to SIC 421 (Special Trade Contractors), and another 6 per cent to SIC 404 (Building Construction). Certain industries in the CBPS also contribute a significant number of always subsidized firms: 6.3 per cent of these firms belong to SIC 886 (Restaurants, Caterers and Taverns), 2.9 per cent to SIC 881 (Hotels and Motels), and a further 8.1 per cent to other "800" industries.

There is considerable redistribution of funds between firms within many industries

Many of the industries that contribute a large fraction of always subsidized firms also contribute a large fraction of never subsidized firms. This suggests that (in addition to factors between industries) factors within an industry are important in determining chronic cross-subsidization.

In fact, there is a substantial fraction of both always subsidized firms and never subsidized firms in many industries. In Construction, fully 26 per cent of firms always receive a subsidy, but almost as large a fraction, 23 per cent, are never subsidized. In Mining (a sector that is net contributor), 35 per cent of firms are never subsidized, but 23 per cent are always subsidized. This pattern holds across many industries. Even in Public Administration (also a net contributor), the proportion of always subsidized firms is 22 per cent, a level comparable to that of the Construction sector. Industries, even defined at a level as fine as the three digit SIC, may be heavily cross-subsidized, yet contain a significant fraction of never subsidized firms.

Conclusions

Experience rating might be thought of as a reform that would change the existing structure of the UI payroll tax from a "tax on jobs" into a "tax on unemployment." If such a redesign of the payroll tax is being considered, then the information provided in this study may be particularly pertinent.

In the past, several different variants of experience rating have been put forward. "Full experience rating" involves charging each firm a different tax rate. Given the small fraction of "always subsidized" firms, differentiation of the tax rate according to individual use of the UI program would lead to a reduction in taxes for the broad majority of firms, and an increase for only a small minority. In this way, it represents a way of lowering the payroll tax. However, full experience rating would imply significant changes in the inter-regional flows of moneys.

"Industry rating" involves a differentiation of the tax rate between industries but no differentiation between the firms with an industry. Given the substantial within industry patterns of cross-subsidization industry rating might not be tightly targeted. Even industries that are large net recipients through UI have a substantial fraction of firms that never receive a net transfer. These surcharged firms would be penalized under such a scheme.

"Within industry rating" involves a differentiation of tax rates between firms but relative to an industry norm rather than an economy wide norm. For example, firms that tend to make greater use of the UI program than the industry average would face a higher premium rate, those making less use would face a lower rate. This scheme need not alter the net transfer of funds between industries, but it would reduce the transfers within them. In this way it may be more respectful of the existing pattern of interregional flows of money.

It should be stressed, however, that the results of the study do not document the extent to which the layoff and human resource practices of firms are responsive to the UI premium structure. They reveal rather the extent of the incentives in place to alter such behaviour and to influence (over the longer period) the relative size and growth of industries.

Biographical notes

Miles Corak has been a Senior Research Economist with the Business and Labour Market Analysis Division of Statistics Canada since 1991. Before joining Statistics Canada, he was a member of the research staff of the Economic Council of Canada, where he worked as a part of the team that produced the Council publication *Canadian Unemployment: Lessons from the '80s and Challenges for the '90s,* as well as several of the Council's Annual Reviews. His recent publications include "Unemployment Insurance, Work Disincentives, and the Canadian Labour Market: An Overview" which was published by the C.D. Howe Institute earlier this year, and (with Stephen R.G. Jones) "The Persistence of Unemployment", which is forthcoming in the *Canadian Journal of Economics.* His current research deals with the interaction between unemployment insurance and the demand side of the labour market, and with intergenerational income mobility in Canada.

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Copies of the full technical report (when finalised) and further copies of this summary are available from:

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